

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("6897149").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/11/06 14:09
L4	227	(gas near2 (supply or inlet)) near3 ground\$3	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/06 15:14
L5	16	(clean\$4 or etch\$4 or remov\$4) and (substrate or semiconductor or wafer) and ((deposit or residue or contaminant or contamination or film) near3 (fluorine near2 added near2 carbon))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/06 15:02
L6	8	(clean\$4) and (substrate or semiconductor or wafer) and ((deposit or residue or contaminant or contamination or film) near3 (fluorine near2 added near2 carbon))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/06 15:02
L7	91	4 and plasma	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/06 15:14
S1	766	(134/1.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/11/05 11:15
S2	1725	(438/710).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/11/05 11:17
S3	18	S1 and (tank or container or chamber) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:23

## EAST Search History

S4	626	(tank or container or chamber) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:21
S5	37	"134"/\$.ccls. and (tank or container or chamber) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 13:22

## EAST Search History

S6	18	S1 and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:38
S7	412	((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/06 14:09

## EAST Search History

S8	36	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 13:44
S9	427	((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or fluorine or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:44

## EAST Search History

S10	19	S1 and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or fluorine or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:54
S11	37	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") or (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") or (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) or fluorine or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:45

## EAST Search History

S12	5	S1 and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") and (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) and (fluorine or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318")))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 11:57
S13	11	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") and (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) and (fluorine or (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318")))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 12:09

## EAST Search History

S15	0	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and ((oxygen or "O.sub.2" or O2 or Ox or On or Osubx or Osubn or "O.subx" or "O.subn" or "O.sub.x" or "O.sub.n") and (Hydrogen or Hydrogen\$3 or H2 or Hx or Hn or Hsubx or Hsubn or "H.subx" or "H.subn" or "H.sub.x" or "H.sub.n") and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O")) and (C4F8 or "C.sub.4F.sub.8" or "C.sub.xF.sub.x" or "C.sub.nF.sub.n" or "C.sub.xF.sub.n" or "C.sub.nF.sub.x" or Octafluorocyclobutane or (RC adj "318"))))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 16:11
S16	23	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4 or etch\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O"))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 13:48

## EAST Search History

S17	23	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4) same (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O"))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 13:50
S18	18	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4) near5 (tank or container or chamber)) and (substrate or semiconductor or wafer) and (stage or susceptor or hold\$3) and (RF or radio) and exhaust\$4 and (shower\$1head or (shower adj (head or plate)) or manifold or sprayer or ((distribution or diffuser) adj plate) or (gas adj injection adj orifices)) and antenna and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O"))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:03
S19	3102	"134"/\$.ccls. and ((clean\$4 or rins\$4 or treat\$4) near5 (tank or container or chamber)) and (substrate or semiconductor or wafer) and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O"))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:04
S20	239	"134"/1.1.ccls. and ((clean\$4 or rins\$4 or treat\$4) near5 (tank or container or chamber)) and (substrate or semiconductor or wafer) and (water or aqueous or H2O or (H2O or HxO or HnO or "H.sub2O" or "H.subxO" or "H.subnO" or "H.sub.2.O" or "H.sub.x.O" or "H.sub.n.O"))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:05
S21	311	(clean\$4 or rins\$4 or treat\$4 or etch\$4) and (substrate or semiconductor or wafer) and ((supply near4 (plasma or process)) same (conduct\$4 and ground\$4))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:07



## EAST Search History

S22	8	134/1.1.ccls. and (clean\$4 or rins\$4 or treat\$4 or etch\$4) and (substrate or semiconductor or wafer) and ((supply near4 (plasma or process)) same (conduct\$4 and ground\$4))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:17
S23	1	134/1.1.ccls. and (clean\$4 or rins\$4 or treat\$4 or etch\$4) and (substrate or semiconductor or wafer) and ((supply near4 (plasma or process)) same (conduct\$4 near20 ground\$4))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:19
S24	1	134/1.1.ccls. and (clean\$4 or rins\$4 or treat\$4 or etch\$4) and (substrate or semiconductor or wafer) and (((supply near4 (plasma or process)) same (conduct\$4 near20 ground\$4)))	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:27
S25	21	antenna same wave\$1guide same body same ((many or multiple or plural\$4) near2 (holes or openings or slots or slits)) same dielectric	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 14:55
S26	4	("20040011379" "20040065344" "478 6352" "6925731").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 16:02
S27	643	ohmi near2 tadahiro.in.	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 16:02
S28	97	masaki near2 hirayama.in.	US-PGPUB; USPAT; USOCR	OR	ON	2007/11/05 16:02
S29	558	ohmi near2 tadahiro.in.	EPO; JPO; DERWENT	OR	ON	2007/11/05 16:02
S30	158	masaki near2 hirayama.in.	EPO; JPO; DERWENT	OR	ON	2007/11/05 16:02
S31	4334	(134/42,902).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/11/05 16:11